

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

ARNOLD, WHITE & DURKEE
Attn. Kammerer, Patricia A.
P.O. Box 4433
Houston, TX 77210
UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

REC'D. - A. W. & D.
OCT 05 1998
INTERNATIONAL DEPT

Date of mailing
(day/month/year)

29/09/1998

Applicant's or agent's file reference

MOBT191P

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/US 98/00083

International filing date
(day/month/year)

05/01/1998

Applicant

MONSANTO COMPANY et al.

U.S. case MOBT 191--- docketed File Foreign
Search for 10-29-98 by Sh

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Mireille Claudepierre

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference MOBT191P	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 98/00083	International filing date (day/month/year) 05/01/1998	(Earliest) Priority Date (day/month/year)
Applicant MONSANTO COMPANY et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (see Box I).
2. ☐ Unity of invention is lacking (see Box II).
3. ☒ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing
 - ☒ filed with the international application.
 - ☐ furnished by the applicant separately from the international application,
 - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
 - ☐ Transcribed by this Authority
4. With regard to the **title**, ☒ the text is approved as submitted by the applicant
 - ☐ the text has been established by this Authority to read as follows:
5. With regard to the **abstract**,
 - ☒ the text is approved as submitted by the applicant
 - ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.
6. The figure of the **drawings** to be published with the abstract is:

Figure No. _____ ☐ as suggested by the applicant.
☐ because the applicant failed to suggest a figure.
☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 98/00083

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/82 C12N15/52 C12N15/62 C12N15/81 C12P7/62
A01H5/00 C08G63/06

According to International Patent Classification(IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12P C12N A01H C08G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 526 850 A (KANEGAFUCHI CHEMICAL IND) 10 February 1993 see the whole document ---	133
X	WO 95 33064 A (PROCTER & GAMBLE) 7 December 1995 see examples 1-4 ---	132
X	WO 95 33065 A (PROCTER & GAMBLE) 7 December 1995 see examples 1-5 ---	132
X	WO 97 07230 A (PROCTER & GAMBLE) 27 February 1997 see examples 1-3 ---	132
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search

17 September 1998

Date of mailing of the international search report

29/09/1998

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Maddox, A

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 98/00083

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 07229 A (PROCTER & GAMBLE) 27 February 1997 see example 4	132
Y	WO 94 11519 A (ZENECA LTD ;FENTEM PHILIP ANTHONY (GB)) 26 May 1994 see page 5, line 17 - page 6, line 34 see page 8, line 21 - page 11, line 19	1-82,85, 86,91, 92, 97-104, 109-111, 114-122, 125-131
Y	TIMM, A., ET AL.: "Cloning and molecular analysis of the poly(3-hydroxyalkanoic acid) gene locus of Pseudomonas aeruginosa PAO1" EUROPEAN JOURNAL OF BIOCHEMISTRY, vol. 209, no. 1, October 1992, pages 15-30, XP002077729 see figure 2	1-82,85, 86,91, 92, 97-104, 109-111, 114-122, 125-131
Y	HAYASHI, M., ET AL.: "Changes in the targeting efficiencies of proteins to plant microbodies caused by amino acid substitutions in the carboxy-terminal tripeptide" PLANT CELL PHYSIOL, vol. 38, no. 6, 1997, pages 759-768, XP002077730 see the whole document	3,4,64, 65
Y	OLSEN, L.J., ET AL.: "Targeting of glyoxysomal proteins to peroxisomes in leaves and roots of a higher plant" THE PLANT CELL, vol. 5, no. 8, August 1993, pages 941-952, XP002077731 see the whole document	5-8, 26-31, 57-62, 80,81
Y	KATO, A., ET AL.: "Targeting and processing of a chimeric protein with the N-terminal presequence of the precursor to glyoxysomal citrate synthase" THE PLANT CELL, vol. 8, no. 9, September 1996, pages 1601-1611, XP002077732 see the whole document	2,39,63

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 98/00083

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HAYASHI, M., ET AL.: "Transport of chimeric proteins that contain a carboxy-terminal targeting signal into plant microbodies." THE PLANT JOURNAL, vol. 10, no. 2, 1996, pages 225-234, XP002077733 see the whole document ---	3,4
A	OLESEN, C., ET AL.: "Brassica napus mRNA for glyoxysomal isocitrate lyase" EMBL SEQUENCE ACCESSION NO. Y13356, 29 May 1997, XP002077734 see the whole document ---	5-8, 26-31, 57-62, 80,81
A	WO 91 00917 A (MASSACHUSETTS INST TECHNOLOGY) 24 January 1991 see page 36, line 15 - page 38, line 6; figure 6 see page 45, line 23 - page 47, line 30 ---	12, 32-34,38
A	BIOLOGICAL ABSTRACTS, vol. 102, Philadelphia, PA, US; abstract no. 4612, LEAF T A, ET AL.: "Saccharomyces cerevisiae expressing bacterial polyhydroxybutyrate synthase produces poly-3-hydroxybutyrate." XP002077735 see abstract & MICROBIOLOGY (READING) 142 (5). 1996. 1169-1180., ---	82,84, 109,112, 113
A	WO 94 24289 A (EUROLYSINE ;NICAUD JEAN MARC (FR); LABAT NATHALIE (FR); ITO HISAO) 27 October 1994 see the whole document ---	82,84, 109,112, 113
A	WO 97 22711 A (UNIV MINNESOTA ;SHERMAN DAVID H (US); WILLIAMS MARK D (US); XUE YO) 26 June 1997 see the whole document ---	87-90
A	LEIJ VAN DER F R ET AL: "STRATEGIES FOR THE SUSTAINABLE PRODUCTION OF NEW BIODEGRADABLE POLYESTERS IN PLANTS: A REVIEW" CANADIAN JOURNAL OF MICROBIOLOGY, vol. 41, no. SUPPL. 01, 1995, pages 222-238, XP002045278 see page 232 - page 235 ---	1-133

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 98/00083

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	POIRIER Y ET AL: "PRODUCTION OF POLYHYDROXYALKANOATES, A FAMILY OF BIODEGRADABLE PLASTICS AND ELASTOMERS, IN BACTERIA AND PLANTS" BIOTECHNOLOGY, vol. 13, February 1995, pages 142-150, XP002045222 see the whole document ----	1-133
A	EGGINK G ET AL: "THE ROLE OF FATTY ACID BIOSYNTHESIS AND DEGRADATION IN THE SUPPLY OF SUBSTRATES FOR POLY(3-HYDROXYALKANOATE) FORMATION IN PSEUDOMONAS PUTIDA" FEMS MICROBIOLOGY REVIEWS, vol. 103, no. 2/04, December 1992, pages 159-163, XP002045279 see page 161, right-hand column - page 162 ----	1-133
A	EP 0 274 151 A (UNIV GRONINGEN) 13 July 1988 see the whole document ----	1-133
A	WO 92 19747 A (ICI PLC) 12 November 1992 see the whole document ----	1-133
A	WO 95 05472 A (UNIV MICHIGAN) 23 February 1995 see the whole document ----	1-133
A	WO 93 02187 A (UNIV MICHIGAN) 4 February 1993 see the whole document ----	1-133
A	WO 92 18553 A (KOHAP LTD) 29 October 1992 see the whole document -----	132,133

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 98/00083

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0526850 A	10-02-1993	JP 5030980 A	09-02-1993
		US 5290910 A	01-03-1994
WO 9533064 A	07-12-1995	AU 2649795 A	21-12-1995
		BR 9507814 A	12-08-1997
		CA 2191570 A	07-12-1995
		CN 1152944 A	25-06-1997
		EP 0763125 A	19-03-1997
		FI 964786 A	29-01-1997
		JP 10501133 T	03-02-1998
WO 9533065 A	07-12-1995	AU 2650095 A	21-12-1995
		BR 9507830 A	16-09-1997
		CA 2191713 A	07-12-1995
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		EP 0763126 A	19-03-1997
		FI 964785 A	29-01-1997
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WO 9100917 A	24-01-1991	CA 2062816 A	11-01-1991
		EP 0482077 A	29-04-1992
		JP 5500751 T	18-02-1993
		US 5480794 A	02-01-1996
		US 5534432 A	09-07-1996
		US 5663063 A	02-09-1997
		US 5245023 A	14-09-1993
		US 5250430 A	05-10-1993
WO 9424289 A	27-10-1994	FR 2704237 A	28-10-1994
		AU 6681094 A	08-11-1994

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 98/00083

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9722711 A	26-06-1997	NONE	
EP 0274151 A	13-07-1988	NL 8603073 A	01-07-1988
		CA 1335370 A	25-04-1995
		DE 3789377 D	21-04-1994
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		JP 2642937 B	20-08-1997
		JP 63226291 A	20-09-1988
		US 5135859 A	04-08-1992
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WO 9219747 A	12-11-1992	AU 655816 B	12-01-1995
		AU 1579792 A	21-12-1992
		CA 2109221 A	25-10-1992
		EP 0589898 A	06-04-1994
		JP 6510422 T	24-11-1994
		US 5502273 A	26-03-1996
WO 9505472 A	23-02-1995	US 5610041 A	11-03-1997
		AU 7633094 A	14-03-1995
		EP 0719342 A	03-07-1996
		JP 9501832 T	25-02-1997
WO 9302187 A	04-02-1993	AU 671953 B	19-09-1996
		AU 2323892 A	23-02-1993
		BE 1006851 A	10-01-1995
		BR 9206297 A	17-10-1995
		CA 2113412 A	04-02-1993
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		HU 66825 A	30-01-1995
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		JP 6509233 T	20-10-1994
		MX 9204245 A	01-02-1993
		NL 9201288 A	16-02-1993
		NO 940157 A	18-03-1994
		NZ 243626 A	28-03-1995

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

US 98/00083

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		SK 6494 A	05-10-1994
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		AU 8612191 A	17-11-1992
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